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November 9, 2004

Mary L. Cottrell, Secretary Department of Telecommunication and Energy One South Station, 2<sup>nd</sup> Floor Boston, MA 02202

D.T.E. 04-85 — Petition of Boston Edison Company and Commonwealth Electric Re: Company for Approvals Relating to the Restructuring of Power Purchase Agreements with Northeast Energy Associates Limited Partnership

Dear Secretary Cottrell:

Enclosed please find the responses of Boston Edison Company and Commonwealth Electric Company d/b/a NSTAR Electric (the "Companies") to discovery questions asked by the Attorney General and the Department of Telecommunications and Energy in the above-referenced proceeding, as listed on the following Discovery Log. Please note that certain documents that are responsive to these questions are confidential and are being filed under separate cover with the Attorney General and the Hearing Officer only.

Thank you for your attention to this matter.

Very truly yours,

John K. Habib

**Enclosures** 

cc:

Service List

Joan Foster Evans, Hearing Officer (2)

Colleen McConnell, Assistant Attorney General (2)

# LOG OF RESPONSES FILED

# **D.T.E. 04-85**

# November 9, 2004 (Second Filing)

AG-1-1	Filed November 8	Attachment AG-1-1 (a) Attachment AG-1-1 (b) Attachment AG-1-1 (c) Attachment AG-1-1 (d) Attachment AG-1-1 (e)
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Information Request: DTE-1-1

November 9, 2004

Person Responsible: Geoffrey O. Lubbock

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#### Information Request DTE-1-1

Refer to Exh. NSTAR-GOL at 15. Please provide any specific exhibit or excel table that gives a detail explanation of the calculation of the energy and capacity revenues received by the Companies following the equation stated in Exh. NSTAR-GOL at 15.

#### Response

As noted in Exhibit NSTAR-GOL at 15, the calculation of the energy and capacity revenues are defined in the Amended and Restated Agreements as provided in Appendix A of the petition, specifically bates pages 39, 175, 286 and 367. Although prepared for a different purpose, Exhibit NSTAR-GOL-3, specifically line 2 (which sums the individual calculations on pages 2 through 53) provides an illustration of the hour-by-hour calculation needed to determine the energy component. Similarly, Exhibit NSTAR-GOL-3, page 54 shows the calculation of capacity payments on lines 1 through 7. Additionally, Figure 1 of Exhibit NSTAR-GOL, page 20 may be helpful in understanding the flow of the energy (first three rows) and capacity (fourth row) calculations.

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Information Request: DTE-1-10

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Person Responsible: Robert B. Hevert

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#### Information Request DTE-1-10

Refer to Exh. NSTAR-RBH at 22. Please provide in Excel format the "assessment (in which) the portfolio bidders were asked to disaggregate their bids into the several components that would allow for a side-by-side comparison of bids for individual contracts and the portfolio taken as a whole" with which "CEA and the Company determined that the NEA bid was the lowest viable bid."

### Response

#### CONFIDENTIAL ATTACHMENT

Please refer to the response to Information Request AG-1-2, Attachment AG-1-2 (CONFIDENTIAL) for copies of the NEA bids, including: (1) Bidder A's non-binding portfolio bid; (2) Bidder B's non-binding disaggregated NEA bid, (3) Bidder C's non-binding disaggregated NEA bid, and (4) Bidder D's NEA-only bid. Please also refer to Attachment DTE-1-10 CONFIDENTIAL for an Excel spreadsheet providing the disaggregated bids that were received.

Information Request: **DTE-1-12** 

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Person Responsible: Robert B. Hevert

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#### Information Request DTE-1-12

Refer to Exh. NSTAR-RBH at 16-17, lines 19-9, respectively, which refers to two pricing options included in the PPA Entitlement Bid Form. Please confirm which pricing option NSTAR used in its D.T.E. 04-85 calculations, and explain why the Companies chose that particular pricing option. Provide prices bid by Bidder B, C, and D under both options.

### Response

NSTAR Electric used pricing option 1 for the calculations used in D.T.E. 04-85 for Bidders A, B and D and pricing option 2 for the calculations used for Bidder C. Pricing option 1 was used for Bidders A, B and D because their NEA bids were given as monthly support payment streams. Pricing option 2 was used for Bidder C's NEA bid because their bid was based on a fixed \$/MWh each year. Please refer to the response to Information Request AG-1-2, Attachment AG-1-2 **CONFIDENTIAL** for the amounts bid by Bidders A, B, C and D.

Information Request: DTE-1-15

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Person Responsible: Robert B. Hevert

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#### **Information Request DTE-1-15**

On what date did each of the bidders make their initial bid for the contracts? On what date did each of the bidders make their final bid for the contracts?

#### Response

Bidders submitted final bids on December 3, 2003. After negotiations and discussions with CEA and NSTAR Electric, bidders and were asked to re-price their final bids based on these discussions. The chart below shows the dates each bidder submitted their repriced bids<sup>1</sup>.

	Bidder A	Bidder B	Bidder C	Bidder D
Final Bid	Dec. 3	Dec. 3	Dec. 3	Dec. 3
Bid Re-Price	Dec. 4	Dec. 5		
	Dec. 22	Jan. 12		
	Jan. 13	Feb. 11		
	Feb. 10	Feb. 12		
	Feb. 24	Mar. 25		•
	Mar. 1	Mar. 31		
	Mar. 2			

<sup>&</sup>lt;sup>1</sup> Other than Bidder D, none of the final bids was binding.

Information Request: DTE-2-1

November 9, 2004

Person Responsible: Geoffrey O. Lubbock

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#### Information Request DTE-2-1

Refer to Exh. NSTAR-GOL, Page 12, lines 11 through 14. Please explain the economic reasons why the pricing provisions of the NEA-A, NEA-B and NEA-2 contracts include provisions for fixed payments, while the pricing provisions for the NEA-1 contract includes a combination of fixed and variable prices linked to the price of fuel.

### Response

The Existing PPAs were the result of two separate competitive RFPs for Non-Utility Generation in the 1980s. Thus, the pricing provisions were based on proposals made by NEA. NSTAR Electric has no information about the reason that NEA structured its proposals as it did.

Information Request: DTE-2-2

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Person Responsible: Geoffrey O. Lubbock

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#### Information Request DTE-2-2

Refer to Exh. NSTAR-GOL, Page 10, line 19, through page 11 line 1. Please explain the economic reasons for the inclusion of NSTAR Electric's full portfolio of PPAs within the scope of the 2003 Auction, as listed in Exh. NSTAR-GOL-1. As part of this response, explain why the Vermont Yankee unit was included in the 2003 Auction when the Companies had previously restructured the PPA for this unit, as noted on lines 15 and 16 of Page 10.

#### Response

As described in Exhibit NSTAR-GOL, pages 5 through 7, NSTAR Electric is obligated to mitigate its PPAs consistent with the Restructuring Act and Boston Edison's Department-approved Restructuring Settlement and Commonwealth's Department-approved Restructuring Plan. Thus, all existing PPAs were included in the 2003 Auction, regardless of expiration date or restructuring history, in order to maximize any possible benefit to customers. Cambridge's PPA with Vermont Yankee was included to allow for the possibility that of movements in forward markets could allow Cambridge's customers to benefit from additional savings.

Information Request: DTE-2-3

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Person Responsible: Geoffrey O. Lubbock

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#### Information Request DTE-2-3

Refer to Exh. NSTAR-GOL, page 13, lines 15 to 17, discussing the differences between the existing NEA PPAs, and the NEA Restructuring. Mr. Lubbock states, "[t]he principal difference is that NEA may satisfy its delivery obligation to deliver Contract Energy from any source of supply available to NEA." Please provide the corresponding provisions in the Existing PPAs that were modified by the NEA Restructuring, and explain the reason for the changes.

#### Response

Under the NEA-A and NEA-B PPAs, Capacity and Associated Energy are defined as the "...available capacity and hourly generation of the Facility" (see Petition, Appendix A at Bates pages 62 and 199). Under the NEA-1 PPA, Article 1 states in part "...the Company agrees to purchase and take delivery of a 25,000 kilowatt entitlement to the capacity and related energy produced by the Unit..." (see Petition, Appendix A at Bates page 306). Under the NEA-2, PPA, Article 1 defines the Capacity and Associated Energy as "...the available capacity and hourly generation of the Facility..." (see Petition, Appendix A at Bates page 387).

The ability to deliver energy from sources other than the Bellingham Facility was a necessary condition for the restructuring of the PPAs for NEA because it provided flexibility for NEA to deliver energy from other resources whenever the Bellingham Facility was not market-competitive.

Information Request: DTE-2-6

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Person Responsible: Geoffrey O. Lubbock

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#### <u>Information Request DTE-2-6</u>

Refer to Exh. NSTAR-GOL, Page 14, lines 7 through 13, where it states, "These capacity quantities are comparable to the quantities currently received under the existing agreements and will be delivered from Bellingham Facility so long as NEA continues to own the Facility. Should NEA sell the Facility, NEA may source capacity from the market." Please explain if NEA would continue to comply with the Capacity Requirements stated in Appendix A at 30, 165, 276, and 357 of the Petition, if NEA sells the Facility. Provide the respective provisions of the Appendix that specify how the Companies would proceed in such case.

#### Response

Under the definition of Capacity Requirement in each Amended and Restated PPA (see Petition, Appendix A at Bates pages 30, 165, 276 and 357) NEA would be obligated to deliver capacity. As stated in the second sentence of the definition: "...Upon the sale, assignment or transfer by NEA of its interest in the Facility during the Term hereof, Capacity Requirement shall be fixed at the Capacity Requirement in effect on the date immediately prior to such sale, assignment, or transfer."

Information Request: DTE-2-12

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Person Responsible: Geoffrey O. Lubbock

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# **Information Request DTE-2-12**

Refer to Exh. NSTAR-GOL, Page 23, lines 1 through 11. Please explain the calculations and assumptions for the \$15,000,000 limit on any adjustment to the Bid Price Amount.

#### Response

The \$15,000,000 limit on adjustments was a negotiated value designed to insulate customers against a large downward swing in market prices.

D.T.E. 04-85

Information Request: DTE-2-13

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# <u>Information Request DTE-2-13</u>

Refer to Exh. NSTAR-GOL, Page 23, lines 1 through 11. Please explain the economic or financial factors that were used to determine the use of a \$15,000,000 limit on adjustments to the Bid Price Amount over or under the benchmark payment of \$12,566,453.

## Response

Please see the Company's response to Information Request DTE-2-12.

Department of Telecommunications and Energy

D.T.E. 04-85

Information Request: DTE-2-17

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Person Responsible: Geoffrey O. Lubbock

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#### **Information Request DTE-2-17**

Refer to the Companies' responses to IR-AG-1-8 and IR-AG-1-9. Please explain the reason why CEA uses the 50 percent debt and 50 percent equity to come up the discount rate while the Companies use the Actual Capital structure showed in IR-AG-1-9 to get their discount rates for each Company. In addition, please explain why the two companies are using different rates for debt and equity in these two responses.

#### Response

As described in D.T.E. 04-60, Exhibit DTE-2-2:

NSTAR Electric instructed CEA to use 7.82 percent as a discount or hurdle rate based on its calculation of the Weighted Average Cost of Capital (WACC) for each company. NSTAR Electric calculated this by using the target capital structure for each of the Companies and the marginal cost of debt and equity. This is a standard investment analysis procedure as outline in one of the leading finance textbook "Capital Investment and Valuation" by Richard A. Brealey and Stewart C. Myers page 393:

"the most commonly used adjusted discount rate is the after-tax weighted-average cost of capital, or WACC:

WACC = 
$$r_D(1-t_C) \frac{D}{V} + r_E \frac{E}{V}$$

Here,  $r_D$  and  $r_E$  are the expected rates of return demanded by investors in the firm's debt and equity securities, respectively; D and E are the current market values of debt and equity; and V is the total market value of the firm (V=D+E)."

In simple words, the net present value of a new investment should exceed the cost of funding the new investment. A new investment should pay for itself on a stand-alone basis. If a company has borrowed debt in the past at a low rate, it would be illogical to use that rate to analyze new investments, if one had to borrow money at a much higher rate to pay for the investment. The reverse is also true. If a company can borrow at 6 percent for a long-term debt issuance to fund an investment, it would be illogical to use the company's historical average cost of debt (8.92 percent for Cambridge and 8.82 percent for Commonwealth) to analyze

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D.T.E. 04-85

Information Request: **DTE-2-17** 

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the investment value. (Note: this analysis is different from Cost of Service where a company is allowed to recover its actual historical costs).

Similarly, if the current capital structure were very different from the target capital structure, it would be illogical to invest based on the current capital structure. For example, if a company had an equity to equity-plus-long-term-debt ratio ("equity ratio") of 70 percent but a target capital structure of 50 percent, the WACC (hurdle rate) would be much higher if one used the 70 percent equity ratio and the company would not invest in projects that would have contributed to the value of the firm using a marginal cost of money. Finally, the impact of taxes needs to be incorporated because taxes represent a source or use of funds.

The discount rate used in the CEA analysis was the WACC for the two companies based on the incremental cost of capital at the time of the investments.

NSTAR's treasury department provided an estimate of 6 percent for a long-term debt ("LTD") issuance based on it's current knowledge of the LTD market. The equity return is the Company's current estimate of its cost of equity. The 50 percent debt equity ratio is the companies' current target capital structures. To determine the after-tax cost of debt, the 6 percent rate was reduced by the 39.225 percent effective tax rate. The resulting calculation of a Weighted Average Cost of Capital is:

			Weighted Cost of Capit			
<b>Description</b>	Actual Capital Structure	Cost Rate	Before Taxes	After Taxes		
Debt	50%	6.00%	3.00%	1.82%		
Equity	<u>50%</u>	12.00%	<u>6.00%</u>	6.00%		
Total	<u>100.00%</u>		9.00%	7.82%		

While the precise level of benefits to customers is affected by the regulatory recovery methods, the Company considered that the appropriate hurdle rate to use to analyze all potential buyouts was the WACC for each company.

As stated above, the current capital structure and the historical cost of debt are inappropriate to use to evaluate future capital investment."

Please also refer to the testimony in D.T.E. 04-60, Tr. 1, at 102-104.

Information Request: AG-3-17

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Person Responsible: Geoffrey O. Lubbock

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# Information Request AG-3-17

Please explain the basis for the use of the discount rate of 7.82% by Mr. Hevert for all contract and bid evaluations.

### Response

Please refer to the response to Information Request AG-1-8.

Information Request: **AG-3-18** 

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Person Responsible: Geoffrey O. Lubbock

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## **Information Request AG-3-18**

Please explain the basis for the use of the discount rate of 8.1% for determining present value pursuant to the terms of the Bellingham Execution Agreement. See p. 4.

# Response

Please refer to the response to Information Request DTE-1-2.

Information Request: AG-3-28 (B)

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Person Responsible: Geoffrey O. Lubbock

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# Information Request AG-3-28 (B)

Refer to the response to AG-1-1. Please provide copies of all economic analyses performed to support each amendment.

# Response

NSTAR Electric has searched it records and the requested economic analyses are not available.